

WE CLAIM AS OUR INVENTION AND DESIRE TO SECURE PROTECTION FOR:

- 1        1.        A method for analyzing information relative to the time-varying state of
- 2        a plurality of substances within a subsurface petroleum reservoir, comprising the steps of:
- 3                (a)        providing data relative to the physical state of at least one fluid within
- 4        the reservoir;
- 5                (b)        making at least a portion of said data available for analysis by each of a
- 6        plurality of computational applications for characterization, by said applications, of traits
- 7        relating to at least one of :
  - 8                        (1)        the location;
  - 9                        (2)        the state; and
  - 10                        (3)        the volume quantity of the at least one fluid;
- 11                (c)        performing additional computational analysis on data, (including output
- 12        data from said plurality of computational applications in step (b), to optimize said
- 13        characterization of fluid traits;
- 14                (d)        monitoring change over time in at least one of:
  - 15                        (1)        said data;
  - 16                        (2)        said characterization, and
  - 17                        (3)        characteristics of the optimization of step (c)
- 18        to create a historical data profile associated with the characterization of the reservoir data;

19 (e) storing at least a portion of said data and its associated historical data

20 profile; and

21 (f) making said data and data profile accessible over a distributed network,

22 whereby persistent availability of said data and characterization-related information for the

23 reservoir is permitted.